

AMENDMENTS TO THE CLAIMS

1.-25. (Cancelled)

26. (Previously Presented) A phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4;

wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue;

wherein the amino acid at position -2 is selected from the group consisting of E, L and V;

wherein the amino acid at position -1 is a hydrophobic amino acid;

wherein the amino acid at position +1 is G;

wherein the amino acid at position +2 is selected from the group consisting of A, T and S;

wherein the amino acid at position +3 is selected from the group consisting of a hydrophobic amino acid and a phenolic amino acid; and

wherein the amino acid at position +4 is selected from the group consisting of A and G.

27. (Previously Presented) The phosphopeptide of claim 26, wherein the hydrophobic amino acid at position -1 is selected from the group consisting of I and L.

28. (Previously Presented) The phosphopeptide of claim 26, wherein the amino acid at position +3 is selected from the group consisting of F and Y.

29. (Previously Presented) The phosphopeptide of claim 26, wherein said phosphopeptide comprises an amino acid sequence selected from the group consisting of ELYGSYYA (SEQ ID NO: 1), EFYGAFA (SEQ ID NO: 2), EFYGAFG (SEQ ID NO: 3), and AEGELYGSLYA (SEQ ID NO: 4).

30. (Previously Presented) A phosphopeptide comprising an amino acid consensus sequence;

wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4;

wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue;

wherein the amino acid at position -2 is selected from the group consisting of E and P;

wherein the amino acid at position -1 is a hydrophobic amino acid;

wherein the amino acid at position +1 is selected from the group consisting of G and A;

wherein the amino acid at position +2 is T;

wherein the amino acid at position +3 is a hydrophobic amino acid; and

wherein the amino acid at position +4 is selected from the group consisting of G and A.

31. (Previously Presented) The phosphopeptide of claim 30, wherein the hydrophobic amino acid at position -1 is F.

32. (Previously Presented) The phosphopeptide of claim 30, wherein the hydrophobic amino acid at position +3 is selected from the group consisting of Y, F, I and L.

33. (Previously Presented) The phosphopeptide of claim 30, wherein said phosphopeptide comprises an amino acid sequence selected from the group consisting of EFYATYG (SEQ ID NO: 5), EFYGTYG (SEQ ID NO: 6), EFYATYA (SEQ ID NO: 7) and EFYGTYA (SEQ ID NO: 8).

34. (Previously Presented) A phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4;

wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue;

wherein the amino acid at position -3 is an acidic amino acid;

wherein the amino acid at position -2 is selected from the group consisting of L and E;

wherein the amino acid at position -1 is a hydrophobic amino acid;

wherein the amino acid at position +1 is selected from the group consisting of G and A;

wherein the amino acid at position +2 is S;

wherein the amino acid at position +3 is a selected from the group consisting of Y, L and acidic amino acids; and

wherein the amino acid at position +4 is a phenolic amino acid.

35. (Previously Presented) The phosphopeptide of claim 34, wherein the acidic amino acid at position -3 is selected from the group consisting of E and D.

36. (Previously Presented) The phosphopeptide of claim 34, wherein the hydrophobic amino acid at position -1 is L.

37. (Previously Presented) The phosphopeptide of claim 34, wherein the phenolic amino acid at position -4 is selected from the group consisting of Y and F.

38. (Previously Presented) The phosphopeptide of claim 34, wherein said phosphopeptide comprises the amino acid sequence ELLYGSYY (SEQ ID NO: 9).

39. (Previously Presented) A phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4;

wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue;

wherein the amino acid at position -2 is selected from the group consisting of E and P;

wherein the amino acid at position -1 is a hydrophobic amino acid;

wherein the amino acid at position +1 is A;

wherein the amino acid at position +2 is selected from the group consisting of E, Q and H;

wherein the amino acid at position +3 is a hydrophobic amino acid; and

wherein the amino acid at position +4 is G.

40. (Previously Presented) The phosphopeptide of claim 39, wherein the hydrophobic amino acid at position -1 is selected from the group consisting of F, Y and L.

41. (Previously Presented) The phosphopeptide of claim 39, wherein the hydrophobic amino acid at position +3 is selected from the group consisting of V and I.
42. (Previously Presented) The phosphopeptide of claim 39, wherein said phosphopeptide comprises the amino acid sequence EFYAEVG (SEQ ID NO: 10).
43. (Previously Presented) A phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3, +4 and +5;
wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue;
wherein the amino acid at position -2 is selected from the group consisting of E and F;
wherein the amino acid at position -1 is a hydrophobic amino acid;
wherein the amino acid at position +1 is A;
wherein the amino acid at position +2 is E;
wherein the amino acid at position +3 is selected from the group consisting of V and I;
wherein the amino acid at position +4 is G; and
wherein the amino acid at position +5 is R.
44. (Previously Presented) The phosphopeptide of claim 43, wherein the hydrophobic amino acid at position -1 is a phenolic amino acid.
45. (Previously Presented) The phosphopeptide of claim 43, wherein the hydrophobic amino acid at position -1 is F.
46. (Previously Presented) The phosphopeptide of claim 43, wherein said phosphopeptide comprises the amino acid sequence EFYAEVGR (SEQ ID NO: 11).
47. (Cancelled)

48. (New) A peptidomimetic or non-peptide mimetic designed on the basis of the sequence and/or the structure of a phosphopeptide ~~of any one of claims 26, 30, 34, 39 or 43,~~ selected from the group consisting of:

(a) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E, L and V; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is G; wherein the amino acid at position +2 is selected from the group consisting of A, T and S; wherein the amino acid at position +3 is selected from the group consisting of a hydrophobic amino acid and a phenolic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of A and G;

(b) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A;

(c) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is a selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid;

(d) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is selected from the group consisting of E, Q and H; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is G; and

(e) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3, +4 and +5; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and F; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is E; wherein the amino acid at position +3 is selected from the group consisting of V and I; wherein the amino acid at position +4 is G; and wherein the amino acid at position +5 is R;

wherein said peptidomimetic or non-peptide mimetic does not comprise the amino acid sequence RNNEFYA (SEQ ID NO:75), and wherein Y is a phosphorylated tyrosine residue.

49. (Currently Amended) A functional derivative of ~~the~~ a phosphopeptide of any one of claims 26, 30, 34, 39 or 43, selected from the group consisting of:

(a) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E, L and V; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is G; wherein the amino acid at position +2 is selected from the group consisting of A, T and S; wherein the amino acid at position +3 is selected from the group consisting of a hydrophobic

amino acid and a phenolic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of A and G;

(b) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A;

(c) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is a selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid;

(d) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is selected from the group consisting of E, Q and H; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is G; and

(e) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3, +4 and

+5; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and F; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is E; wherein the amino acid at position +3 is a selected from the group consisting of V and I; wherein the amino acid at position +4 is G; and wherein the amino acid at position +5 is R;

comprising at least one moiety attached to said phosphopeptide, wherein the functional derivative does not comprise the amino acid sequence RNNEFYA (SEQ ID NO:75), and wherein Y is a phosphorylated tyrosine residue.

50. (Cancelled)

51. (Cancelled)

52. (Currently Amended) A method of treating or preventing a PTP mediated disease comprising administering to a patient in need thereof a pharmaceutically effective amount of ~~the~~ a phosphopeptide of any one of claims 26, 30, 34, 39 or 43, selected from the group consisting of:

(a) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E, L and V; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is G; wherein the amino acid at position +2 is selected from the group consisting of A, T and S; wherein the amino acid at position +3 is selected from the group consisting of a hydrophobic amino acid and a phenolic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of A and G;

(b) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0

which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A;

(c) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is a selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid;

(d) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is selected from the group consisting of E, Q and H; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is G; and

(e) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3, +4 and +5; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and F; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is E; wherein the amino acid at position +3 is a selected from the

group consisting of V and I; wherein the amino acid at position +4 is G; and wherein the amino acid at position +5 is R;

or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

53. (Currently Amended) The method of claim 52, wherein said disease is cancer and wherein said phosphopeptide ~~is the phosphopeptide of claim 26~~ comprises an amino acid consensus sequence comprising amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E, L and V; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is G; wherein the amino acid at position +2 is selected from the group consisting of A, T and S; wherein the amino acid at position +3 is selected from the group consisting of a hydrophobic amino acid and a phenolic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of A and G; or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

54. (Cancelled)

55. (Currently Amended) The method of claim 52, wherein said disease is diabetes and wherein said phosphopeptide ~~is the phosphopeptide of claim 30~~ comprises an amino acid consensus sequence comprising amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A; or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

56. (Currently Amended) The method of claim 52, wherein said disease is obesity and wherein said phosphopeptide ~~is the phosphopeptide of claim 30~~ comprises an amino acid consensus sequence comprising amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said

amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A; or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

57. (Currently Amended) A method of suppressing appetite, comprising administering to a subject in need thereof a therapeutically effective amount of ~~the phosphopeptide of claim 30,~~ a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A; or a peptidomimetic, non-peptide mimetic or functional derivative of such phosphopeptide.

58. (Currently Amended) The method of claim 52, wherein said disease is inflammation and wherein said phosphopeptide ~~is the phosphopeptide of claim 34~~ comprises an amino acid consensus sequence comprising amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is a selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid; or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

59. (Currently Amended) The method of claim 52, wherein said disease is multiple sclerosis and wherein said phosphopeptide ~~is the phosphopeptide of claim 34~~ comprises an amino acid consensus sequence comprising amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid; or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

60. (Currently Amended) The method of claim 52, wherein said disease is an angiogenesis-dependent disease and wherein said phosphopeptide ~~is the phosphopeptide of claim 34~~ comprises an amino acid consensus sequence comprising amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid; or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

61. (Cancelled)

62. (Currently Amended) The method of claim 52, wherein said disease is an infectious disease and wherein said phosphopeptide ~~is the phosphopeptide of claim 39 or claim 43~~ is selected from the group consisting of:

(a) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0

which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is selected from the group consisting of E, Q and H; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is G; and

(b) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3, +4 and +5; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and F; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is E; wherein the amino acid at position +3 is selected from the group consisting of V and I; wherein the amino acid at position +4 is G; and wherein the amino acid at position +5 is R;

or a peptidomimetic, a non-peptide mimetic or a functional derivative of said phosphopeptide.

63. (Cancelled)

64. (Currently Amended) A pharmaceutical composition comprising ~~the~~ a phosphopeptide of claim 26, 30, 34, 39 or 43, selected from the group consisting of:

(a) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E, L and V; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is G; wherein the amino acid at position +2 is selected from the group consisting of A, T and S; wherein the amino acid at position +3 is selected from the group consisting of a hydrophobic amino acid and a phenolic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of A and G;

(b) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is T; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is selected from the group consisting of G and A;

(c) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -3 is an acidic amino acid; wherein the amino acid at position -2 is selected from the group consisting of L and E; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is selected from the group consisting of G and A; wherein the amino acid at position +2 is S; wherein the amino acid at position +3 is a selected from the group consisting of Y, L and acidic amino acids; and wherein the amino acid at position +4 is a phenolic amino acid;

(d) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3 and +4; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is selected from the group consisting of E and P; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is selected from the group consisting of E, Q and H; wherein the amino acid at position +3 is a hydrophobic amino acid; and wherein the amino acid at position +4 is G; and

(e) a phosphopeptide comprising an amino acid consensus sequence; wherein said amino acid consensus sequence comprises amino acid positions -3, -2, -1, 0, +1, +2, +3, +4 and +5; wherein said amino acid positions are defined by reference to amino acid position 0 which is a phosphorylated tyrosine (Y) residue; wherein the amino acid at position -2 is

selected from the group consisting of E and F; wherein the amino acid at position -1 is a hydrophobic amino acid; wherein the amino acid at position +1 is A; wherein the amino acid at position +2 is E; wherein the amino acid at position +3 is a selected from the group consisting of V and I; wherein the amino acid at position +4 is G; and wherein the amino acid at position +5 is R;

or a peptidomimetic, non-peptide mimetic or functional derivative of ~~such~~ said phosphopeptide.

65. (Cancelled)